



# ENERGY POLICY UPDATE

September 8, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email [Gloria Castro](#).

## UPCOMING WEBINARS

- ENERGY STAR Webinars
- U.S. Dept. of Energy Tribal Renewable Energy Webinar Series for 2014

## UPCOMING EVENTS 2014 – 2015

- NEW!** EPA Clean Power Plan Stakeholder Meeting  
Sep. 10 Phoenix, AZ
- Native Learning Centers - Indian Housing Training Conference  
Sep. 10-14 Tulsa, OK
- NEW!** Arizona's Energy & Water Future: A Candidate Forum  
Sep. 16 ASU, Downtown Campus - Phoenix, AZ
- Arizona Technology Summit  
Sep. 17 Phoenix, AZ
- HTUF 2014 Nat'l. Meeting - The Forum for Action in High-Efficiency Commercial Vehicles  
Sep. 22-24 Argonne, IL
- NEW!** EPA Clean Power Plan Stakeholder Meeting  
Sep. 24 Phoenix, AZ
- World Energy Engineering Congress  
Oct. 1-3 Washington, DC

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The Arizona Republic now has limited access. As such, links may or may not work.

## ARIZONA-RELATED

### Arizona Leads Nation in Planned Clean-Energy Hirings

[Arizona Daily Star, Aug. 29] WASHINGTON — Arizona businesses announced plans earlier this year to hire more than 3,000 workers in clean-energy industries, letting the state claim the biggest growth in renewable-energy jobs in the nation for the second quarter of 2014. A report released Thursday by Environmental Entrepreneurs said the bulk of the new Arizona jobs — and a large share of the total planned for the nation — could be attributed to the proposed Solar Wind Energy Tower project in San Luis, near Yuma. Developers of that project said they plan to add 2,350 workers, with most of those being construction jobs at the \$1.5 billion plant. That announcement allowed Arizona to knock California out of first place for the quarter. "It's tough to compete with California because there's just less of us," said Susan Bitter Smith, a member of the Arizona Corporation Commission. "But Arizona is always in the top three because it's a place of great opportunity for renewable energy." The report does not measure actual hiring but only a company's announced plans to hire workers across the range of clean-energy industries, from solar- and wind-power generation to electric vehicles and insulation. Between April and June, those businesses said they planned to add 12,582 such jobs nationally. Solar-power firms announced the highest number of hires for the fifth consecutive quarter, with 5,895 jobs, while wind-power businesses were second with a planned 2,750 hires, according to the report. The biggest numbers by far came from the San Luis project. Even though most of the jobs announced this spring will be temporary, backers said they will still provide years of employment in the area.

### Arizona Loses Bid for \$5 Billion Tesla Plant

*The electric car manufacturer will build the massive battery plant in Nevada.*

[Arizona Republic, Sept. 3] Arizona lost its bid to land Tesla Motors Inc.'s massive electric-car battery "gigafactory," one of the largest economic development projects in the nation, to Northern Nevada. The Palo Alto, Calif.-based company and Nevada Gov. Brian Sandoval announced a Thursday press conference in the Silver State's capital that appears to make that state a lock for the project. Tesla has been deciding among five states for its 6,500-worker battery factory since February. Arizona, New Mexico, Texas and later, California, were also in the mix, company officials said. Sites from Tucson to Surprise were suggested for the massive project in Arizona. Tesla officials previously said they were clearing ground east of Reno, Nev., but that they would work on two or even three sites in case of delays at the primary site. That has diminished hopes that the factory would come to Arizona for months. Nevada lawmakers are discussing a special session next week to pass incentives for Tesla, Sandoval told reporters there.

[Geothermal Energy Expo](#)  
Sep. 28-Oct. 1 Portland, OR

[SRP 2015 Economic Forecast](#)  
Oct. 2 Phoenix, AZ

[AWEA Offshore Windpower Conference & Exhibition 2014](#)  
Oct. 7-8 Atlantic City, NJ

[Ute Tribe Energy Conference & Expo](#)  
Oct. 14-15 Denver, CO

[Nat'l. Alternative Fuel Vehicle \(AFV\) Day Odyssey](#)  
Oct. 17

[Solar Power International](#)  
Oct. 20-23 Las Vegas, NV

[GreenBuild International Conference & Expo](#)  
Oct. 22-24 New Orleans, LA

[World Bio Markets USA](#)  
Oct. 27-29 San Diego, CA

[VERGE SF 2014](#)  
Oct. 27-30 San Francisco, CA

[Governor's Celebration of Innovation](#)  
Nov. 13 Phoenix, AZ

[ACEEE Intelligent Efficiency Conference](#)  
Nov. 16-18 San Francisco, CA

[Renewable Energy Markets Conference](#)  
Dec. 2-4 Sacramento, CA

[Solar Power Generation USA](#)  
Feb. 4-5 San Diego, CA

[GreenBiz Forum 2015](#)  
Feb. 17-19 Phoenix, AZ

[2015 Sustainability Solution Festival](#)  
Feb. 17-22 Phoenix, AZ

[NEW! Alternative Clean Transportation \(ACT\) Expo](#)  
May 4-7 Dallas, TX

[Solar Power Generation Mexico](#)  
May 19-20, 2015  
World Trade Center, Mexico

[Green Building Lecture Series](#)  
Granite Reef Senior Center  
Scottsdale, AZ

[ASU Sustainability Series Events](#)

[Green Building Lecture Series](#)  
Scottsdale, AZ

### [ASU Biodesign Institute Has \\$1.5 Billion Impact on Arizona Economy](#)

[ASU News, Aug. 26] Arizona State University's Biodesign Institute has made an economic impact of \$1.5 billion in its first decade of operation, according to a study by the Seidman Research Institute at ASU's W. P. Carey School of Business. The annual direct economic impact is the highest for any single bioscience research institute in the state, according to the report. Annually, Biodesign Institute operations have contributed an average of \$135.5 million in direct impacts on Arizona's economy, created and supported more than 1,600 high-paying jobs and generated \$10.5 million in state and local tax revenues. "This study demonstrates that we are making good on our commitment to provide a significant return on investment to our state," said ASU President Michael Crow. "We're pleased with the numbers, but ultimately, we measure Biodesign's success by the impact our world-class researchers are having on improving the quality of life here and across the world – as well as ensuring future success in the training of our next generation of scientists." The real world impact of Biodesign was dramatically underscored by contributions from Charles Arntzen, an ASU Regents' Professor and founding director of the Biodesign Institute, who had a hand in the development of the first experimental treatment in people, in a desperate effort to fight the Ebola virus.

### [Southwest Gas Corp. Subsidiary To Acquire the Link-Line Group of Companies](#)

[Arizona Republic, Sept. 2] Southwest Gas Corp. subsidiary NPL Construction Co. plans to acquire the Link-Line Group of Companies, the business announced Tuesday. The deal has an equity value of \$185 million minus the assumption of debt and working capital adjustments. In addition to Link-Line Contractors Ltd., the group includes W.S. Nicholls Construction Inc. and W.S. Nicholls Industries Inc. and a 50 percent stake in W.S. Nicholls Western Construction Ltd, all based in Canada. In a related transaction, Southwest affiliate companies will acquire part of Brigadier Pipelines Inc., a U.S.-based Link-Line affiliate. All transactions are expected to close in October. The companies are expected to continue operating as independently.

### [TEP Installing New Giant Solar Receiver](#)

[KVOA.com, Sept. 2] Tucson, AZ – A giant 'solar receiver' will help provide a renewable boost to Tucson Electric Power's largest power plant after its installation next to the H. Wilson Sundt Generating Station on Wednesday, Sept. 3. Installation of AREVA's Solar's Compact Linear Fresnel Reflector solar steam reaches its completion. Beginning at 8:15 a.m, workers will begin to lift the 200,000 pound receiver into place on two dozen 100-foot towers. With the aid of multiple cranes, the 1,400-foot-long device will complete the generator. The AREVA system is expected to be in service by early November. With the help from the boost, the generator will increase the plant's productivity by up to five megawatts during peak seasons without added emissions.

### [Top 10 Solar Energy States per Capita \(US\)](#)

[Clean Technica, Sept. 3] [Environment America Research and Policy Center](#) recently released *Lighting the Way*, a fascinating hard numbers–based take on the US solar energy boom, the top states that fostered it last year, and what the others are up to. The research organization finds that the top 10 solar energy states—Arizona, California, Colorado, Delaware, Hawaii, Massachusetts, Nevada, New Jersey, New Mexico and North Carolina—have initiated strong, cutting-edge policies that are enabling increasing numbers of homeowners, businesses, communities, and utilities to go solar. Environment America also touts rising stars like New York, Vermont, and Georgia. Policymakers and developers in other states can use this type of information to help plan their own efforts. The Environment America report notes that solar photovoltaics produce 96% less global warming pollution per unit of energy than coal-fired power plants over their entire life cycle and cause 91% less global warming than natural gas-fired power plants.

### [UA Refocuses Tech-Park Strategy](#)

[Arizona Daily Star, Aug. 31] The University of Arizona's technology park is nearing its 20th anniversary with a new strategy focusing on more active recruitment of firms eager to collaborate with the UA. Under Tech Parks Arizona's new strategy, two new companies so far have been lured to the sprawling UA Tech Park — formerly called the UA Science and Technology Park — at 9070 S. Rita Road. The Global Advantage program focuses on identifying and courting companies that are eager to partner with the UA in six technology areas. "It's a comprehensive strategy for trying to attract technology companies to the tech park and to the region, that want to have relationships with the university," said Bruce Wright, associate vice president of Tech Parks Arizona. The new strategy is part of an ongoing overhaul of UA tech park operations under Tech Launch Arizona, the UA's technology commercialization arm. The new Global Advantage strategy aims to more actively identify companies keen to collaborate with the UA and other tech-park tenants, and to help them leverage the tech park's advantages in regional market access, collaborative resources for business and product development, skilled workers and facilities such

as offices and lab space, Wright said. Playing to the strengths of the UA and Tucson, Global Advantage focuses on six technology areas:

- Advanced energy, including solar and other renewables;
- Agriculture, water and arid-lands technology;
- Biosciences, with a focus on medical devices and diagnostics;
- Mining technology, including sustainability and analytics;
- And intelligent transportation systems, such as so-called “smart car” technology.

The UA Tech Park is initially touting university resources and collaboration in areas including informatics and data processing, imaging and optics, sustainability including advanced energy systems, and advanced manufacturing, Wright said.

#### [West Valley Cities, Residents Save Money Through Conservation](#)

[Arizona Republic, Aug. 25] West Valley cities have saved thousands of dollars by reducing energy use and conserving water, and several cities are teaching residents how to do the same at home. Over the past several years, Glendale, Peoria and Goodyear have installed energy-efficient lighting, heating and cooling units, and implemented water-conservation methods such as using reclaimed water and desert landscaping that have led to significant savings. Glendale saves about \$329,000 annually in electrical and operational costs and about \$200,000 in water services, while Peoria saves about \$200,000 annually on electrical, operational and water costs, officials said. Goodyear, which began implementing its sustainability efforts more recently, has not calculated its cost reductions yet, but officials gave a “conservative estimate” of about \$10,000 in annual savings. Peoria City Manager Carl Swenson said sustainability is a matter of both environmental and fiscal stewardship.

### **ALTERNATIVE ENERGY & EFFICIENCY**

#### [Interest in Solar Water Heating Spreads Globally](#)

[New York Times, Sept. 3] SAN FRANCISCO — To produce milk and cheese for the world, dairies need cows and grass. But they also go through enormous amounts of hot water each day to flush out milk lines and clean other equipment. And so farmers on King Island, part of the Australian state of Tasmania, were delighted when workers began installing solar arrays on their dairies’ rooftops to capture the energy of the harsh Australian sun and use it to heat water. “They actually look quite attractive, believe it or not,” said Troy Smith, who heads a farmers’ group on the island. He estimates that the solar hot water gear, set up earlier this year, will lower power costs 10 to 15 percent. The Tasmanian government financed the equipment with a \$188,000 grant, and the dairy farmers paid for related expenses like roofing and electrical upgrades. Interest in solar water heating has spread quietly around the world. Though the technique has been around for more than a century, the concept of using the sun to heat water gets far less attention than its better-known cousin, solar electricity produced from photovoltaic panels. The technologies are different. The hot-water application uses plates or tubes — often called solar collectors — to capture the energy from the sun’s rays and use it to heat water that is circulating nearby. The King Island’s farms are using glass-encased tubes made by the Australian company Apricus to heat liquid to transfer the energy of the sun’s heat to water. Photovoltaic panels, by contrast, use semiconducting materials, typically silicon, to stimulate electrons and generate electricity. Both are seen as a solution by governments and individuals eager to move away from fossil fuels, which can be expensive in isolated places like King Island.

#### [NIST Converts Lab To Test Commercial Building Energy Efficiency Technologies](#)

[Energy Manager Today, Aug. 27] The [National Institute of Standards and Technology](#) (NIST) is converting one of its laboratories into the equivalent of a small office building to develop and test smart software technologies designed to slash energy use in commercial buildings. NIST figures that energy-eating operations such as heating, cooling, lighting and powering plug-in equipment can be accomplished more efficiently with existing equipment by more intelligently coordinating their use. At the mock office building now under construction in a standard 1,000 square foot modular lab space, NIST researchers will put this assertion to the test. There, they and their collaborators will investigate whether artificial intelligence tools already used in search engines, robots, routing and scheduling programs, and other technologies can work cooperatively to optimize building performance, including minimizing energy use. Intelligent agents are combinations of software and hardware—sensors, mechanical devices and computing technologies—that perceive their environment, make decisions and take actions in response. They can monitor, communicate, collaborate and even learn, predict and adapt.

### [Siemens To Help U.S. Geological Survey Increase Energy Efficiency](#)

[Electric Light & Power, Aug. 29] [Siemens](#) Government Technologies Inc. won a \$11 million task order by the United States Geological Survey (USGS) to implement [energy efficiency](#) measures at three of its facilities: National Center (Reston, Virginia); Columbia Environmental Research Center (Columbia, Missouri); and the Western Fisheries Research Center (Seattle). Under the Energy Savings Performance Contract (ESPC), an IDIQ contract with the [Department of Energy](#), the cost of the project will be funded by energy savings guaranteed by Siemens. It will allow the USGS to advance President Barack Obama's vision that federal facilities generate 20 percent of their energy from renewables by 2020.

### [The Power of Salt](#)

*MIT study investigates power generation from the meeting of river water and seawater.*

[MIT News, Aug. 20] Where the river meets the sea, there is the potential to harness a significant amount of renewable energy, according to a team of mechanical engineers at MIT.

The researchers evaluated an emerging method of power generation called pressure retarded osmosis (PRO), in which two streams of different salinity are mixed to produce energy. In principle, a PRO system would take in river water and seawater on either side of a semi-permeable membrane. Through osmosis, water from the less-salty stream would cross the membrane to a pre-pressurized saltier side, creating a flow that can be sent through a turbine to recover power. The MIT team has now developed a model to evaluate the performance and optimal dimensions of large PRO systems. In general, the researchers found that the larger a system's membrane, the more power can be produced — but only up to a point. Interestingly, 95 percent of a system's maximum power output can be generated using only half or less of the maximum membrane area. Leonardo Banchik, a graduate student in MIT's Department of Mechanical Engineering, says reducing the size of the membrane needed to generate power would, in turn, lower much of the upfront cost of building a PRO plant.

### [US Renewable Electrical Generation Hits 14.3 Percent](#)

*In the first half of 2014 US wind energy hit 5 percent, while solar more than doubled.*

[Renewable Energy World, Aug. 27] Washington, D.C. — According to the U.S. Energy Information Administration (EIA)'s latest "Electric Power Monthly" report, with data for the first six months of 2014, renewable energy sources (i.e., biomass, geothermal, hydropower, solar, wind) provided 14.3 percent of net U.S. electrical generation. Conventional hydropower accounted for 7.0 percent, while non-hydro renewables provided an even larger share at 7.3 percent. Overall, electrical generation from non-hydro renewable energy sources (i.e., biomass, geothermal, solar, wind) expanded by 10.4 percent compared to the first half of 2013, [according to the EIA](#). Wind power alone increased by 9.0 percent compared to last year and accounted for 5.0 percent of the nation's electrical generation during the first six months of 2014, while solar-generated electricity more than doubled (growing by 115.7 percent). Biomass also grew by 4.0 percent. However, geothermal power dipped by 1.5 percent and conventional hydropower declined by 4.2 percent. Even with the lower output from hydropower and geothermal, net U.S. electrical generation from all renewable sources combined grew by 2.73 percent. By comparison, net electrical generation from all energy sources — renewables, fossil fuels and nuclear power — grew by 2.59 percent.

## **ENERGY/GENERAL**

### [Modernize Retail Electricity Pricing, Says RMI](#)

[Energy Manager Today, Aug. 26] The Rocky Mountain Institute's Electricity Innovation Lab (e-Lab) released a report, "[Rate Design for the Distribution Edge: Electricity Pricing for a Distributed Resource Future](#)," pointing to the need for modernization of retail electricity prices to reflect a changing grid. The report finds that traditional electricity pricing schemes are antiquated in light of the distributed energy resources (DERs) that are being connected to the grid. "Distributed energy resources are fundamentally changing how we interact with the grid, shifting the one-way utility-customer relationship to a two-way exchange of value and services," said RMI Electricity Principal Owen Smith. "Utilities need new rate structures that more closely align with this evolving, 21st-century grid—categorizing, charging and compensating customers and third-party providers for the values and services their DERs provide to the grid or get from it."

## **INDUSTRIES AND TECHNOLOGIES**

### [Solar Makers Set for Record 2014 Shipments on Strong Demand](#)

[Bloomberg, Aug. 29] NEW YORK -- Solar manufacturers are set to ship a record number of panels this year, with the largest makers expected to deliver 52 percent more panel between them than 2013. Hanwha SolarOne Co. saw "robust" volumes in the first half while maintaining its aim to



sell as many as 1.6 gigawatts of panels this year, Chairman and Chief Executive Officer of the Qidong, China-based company Nam Seong-Woo said yesterday on a call with analysts. To keep up with demand, it expects to complete its plant expansion by the end of the year. Trina Solar Ltd., First Solar Inc., JinkoSolar Holding Co., Canadian Solar Inc., and JA Solar Holdings Co. all reported profits in the quarter. Only Hanwha and larger rival Yingli Green Energy Holding Co. cut its shipment forecasts for this year and reported losses. Solar companies are expanding as a supply glut that hurt margins is mopped up.

#### [Trina Solar Looking at Sites for First Overseas Manufacturing Base](#)

[PV Tech, Aug. 26] Major PV manufacturer, Trina Solar said it was planning to better serve its growing US customer base on the back of increased demand through establishing its first PV module manufacturing operations outside China. Management noted in its second quarter earnings call that module demand from the US had increased significantly in the second quarter of 2014 and projected similar strong demand through the rest of the year. Demand was expected to remain strong in 2015 based on preliminary customer requirements, according to management. Trina Solar had been imposed with the lowest 2012 AD and CVD tariffs, compared with its rivals. It also received the lowest in the most recent preliminary ruling. As a result of the second round of recent US anti-dumping and countervailing duties on Chinese solar cells and the first duties being imposed on Taiwanese solar cells, companies are looking at strategies to retain PV module shipments into the rapidly growing US market, while trying to avoid paying duties. Indicating that the US market was a key market for Trina Solar in the future, the company was undergoing site selection analysis for a manufacturing plant but did not say what countries assessments were being made in. Recent reports have identified Mexico and Malaysia as prime candidates, though the US should not yet be ruled out. Trina Solar management noted that it could be supporting customers in the US better in 2015, signalling a decision on site selection soon.

### **LEGISLATION AND REGULATION**

#### [N.Y. Property Tax Exemption for Renewables Bill Ready for Signature](#)

In a move that is expected to boost renewable energy in the state, the New York legislature has sent Gov. Andrew Cuomo a bill ([A.09446](#)) that would extend property tax exemptions for certain solar, wind and biomass projects to Jan. 1, 2025. The bill carries a 15-year property tax exemption for homeowners and residences installing qualified renewable energy systems. According to the New York State Energy Research and Development Authority, property tax exemptions for solar, wind and farm waste energy systems have helped spur the development of renewable energy sources in the Empire State. A.09446 would extend those benefits to 2025, providing developers with incentives to pursue future projects. New York is among several states that are using tax abatement [programs](#) to encourage renewable energy development. Provisions in the bill permit local governments in the state to disallow the exemption in their jurisdictions; however, the bill requires that any such law or resolution must be passed before construction on the system in question has begun.

#### [Solar Company Seeks Stiff U.S. Tariffs to Deter Chinese Spying](#)

*SolarWorld Americas Says Hackers in China Stole Documents*

[New York Times, Sept. 1] In the daunting battle against corporate online espionage worldwide, one major solar company wants to deploy a powerful and novel weapon: higher tariffs. SolarWorld Americas, the largest manufacturer of solar panels in the United States, has asked the Commerce Department to investigate claims that Chinese military personnel broke into the company's computers and stole documents important to its business and its long-running trade dispute with China. The company's request followed the Justice Department's decision to prosecute five members of the People's Liberation Army, [accusing them in May](#) of stealing online files from a group of American companies, most of which had engaged in trade disputes with China. SolarWorld says the new prosecution underscores the sophisticated ways that Chinese companies are retaliating against trade obstacles, especially the use of cyberwarfare. As a deterrent, the company is proposing that the administration should use tariffs to crack down on such retribution.

### **WESTERN POWER**

#### [CA Utility's Natural Gas Proposal Under Fire](#)

[Fierce Energy, Aug. 25] In determining the best way to replace the nuclear power from the San Onofre Nuclear Generating Station (SONGS), which was shuttered last year, San Diego Gas and Electric (SDG&E) has proposed construction of a 600 MW natural gas plant in Carlsbad, California -- and sparked public outcry. More than 16,000 signatures -- from organizations including the

Environmental Defense Fund (EDF), Sierra Club, Union of Concerned Scientists, Vote Solar, Clean Coalition, Environment California, and 350.org -- have been delivered to the California Public Utilities Commission (CPUC), urging them to reject SDG&E's proposal, saying that it would needlessly increase the region's dependence on fossil fuels and claiming that with the approval of the Carlsbad plan, the opportunity to enable renewables, energy efficiency, and demand response to replace the power from SONGS will be lost.

#### [Californians Tear Out Lawns To Cope with Drought](#)

[Associated Press, Aug. 24] Long Beach CA – Rick Blankenship was tired of an insatiable lawn he couldn't keep green, no matter how he watered it, so he decided to tear it out. Three years later, he brims with pride at his new front yard in Long Beach, California, carpeted with natural sage- and emerald green-colored ground covers and shaded by flowering magnolia and peppermint willow trees. "It just sounded like a great way to save money and at the same time, kind of beautify my landscape," said the 51-year-old medical sales director. As California faces an historic drought, more residents are following in Blankenship's footsteps and tearing out thirsty lawns to cut down on water use. Water agencies across the state have been encouraging the change by offering thousands of dollars in rebates to help homeowners make the switch to a drought-friendly landscape with better odds of surviving dry spells common to the local climate. The Metropolitan Water District of Southern California, which covers 19 million people, received requests to remove 2.5 million square feet in residential lawns in July, up from 99,000 in January, said Bill McDonnell, the consortium's water efficiency manager. The Municipal Water District of Orange County is taking in 20 to 30 applications a day, up from just five a week before Gov. Jerry Brown declared a drought emergency earlier this year. "We are just buried right now," said Joe Berg, the agency's water efficiency programs manager. The trend isn't just catching on in Southern California. The Santa Clara Valley Water District, which serves Silicon Valley, received more than 1,700 requests for applications for turf removal rebates during the first six months of the year, a five-fold increase from the same period in 2013, said Marty Grimes, a district spokesman. Water officials hope the shift is more than a fad and marks the beginning of a transformation in the way residents view neighborhood landscapes. Most lawns in Southern California don't bear greenery other than grass but water agency officials say the interest in turf removal programs — fueled in part by an increase in rebate rates — is encouraging.

#### [Natural Gas As a Vehicle Fuel Blows Past Expectations in Texas](#)

[Dallas Business Journal, Aug. 20] With new stations being built and more fleets converting, sales of natural gas as a vehicle fuel more than doubled expectations in Texas, Railroad Commissioner [David Porter](#) said. "Natural gas vehicles are becoming mainstream faster than expected," Porter said. "And there's plenty of room for growth. These excellent sales figures represent only a fraction of potential sales, as more and more fleet operators take advantage of the cost savings, lower emissions and energy security benefits of Texas natural gas." The state collected more than \$2.1 million in taxes on compressed natural gas and liquefied natural gas in the 2014 fiscal year, which ended July 31. That's 220 percent higher than the \$992,000 forecast.

#### [West Texas Oil Boom Causes Energy Prices to Soar](#)

[Energy Manager Today, Aug. 27] Record oil production in West Texas has resulted in congestion on the region's electrical grid and an unexpected electricity rate hike, the *Texas Tribune* reports. Newer drilling practices such as hydraulic fracturing have allowed oil companies to produce more than twice the amount of oil each month than they did three years ago. West Texas' Permian Basin is currently the most lucrative oil-producing region in the United States. Unfortunately, experts at the Electric Reliability Council of Texas (ERCOT), which manages the grid covering most of the state, were not prepared for the spike, and infrastructure has not been able to keep up with electricity necessary to produce drastically increased amounts of oil. From 2007 to 2012, energy consumption in West Texas increased by nearly 14 percent, ERCOT said. While generating enough electricity for the region is a big issue, it isn't the biggest one. Sending power to all those who need it is an even bigger issue, according to the *Texas Tribune* article. Transmission companies are scrambling to build power lines. Fortunately, the \$7 billion Competitive Renewable Energy Zone power lines were planned years before the drilling surge, but other power upgrades will take years to complete, and oil and gas producers may have moved on to other areas by then. Meanwhile, congestion prices in West [Texas](#) are higher than anywhere else in the state. In 2013, west zone congestion prices averaged about \$6.08 per MWh versus 43 cents per MWh for the rest of the state.

#### [Xcel Wants Feds to Get Involved in Boulder's Quest for Its Power Lines, Substations](#)

[Denver Business Journal, Aug. 26] Xcel Energy Inc. has asked the feds to get involved in Boulder's efforts to condemn the utility's equipment in order to set up a new, city-owned utility. Xcel (NYSE: XEL) on Tuesday said it filed a petition with the Federal Energy Regulatory

Commission (FERC), which oversees the nation's electricity grid, to get involved because of the commission's jurisdiction over the transfer of electrical assets under the Federal Power Act. Boulder wants some of Xcel's assets in and around the city, including about 32 miles of high-voltage transmission lines and all or part of nine substations, the utility said.

## ARIZONA STATE INCENTIVES/POLICIES

### ARIZONA COMMERCE AUTHORITY (ACA)

#### INCENTIVES

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- [Job Training](#)
- [Quality Jobs](#)
- [Qualified Facility](#)
- [Computer Data Center Program](#)
- [Research & Development](#)
- [Foreign Trade Zone](#)
- [Military Reuse Zone](#)
- [Angel Investment](#)
- [Renewable Energy Tax Incentive](#)
- [Healthy Forest](#)
- [Sales Tax Exemption for Machinery and Equipment](#)
- [Lease Excise](#)
- [Additional Depreciation](#)
- [Work Opportunity](#)
- [Commercial/Industrial Solar](#)
- [SBIR/STTR](#)
- [Private Activity Bonds](#)
- [QECB's](#)

#### (ACA) PROGRAMS

#### DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)

- [Arizona Incentives/Policies](#)
- [Federal Incentives/Policies](#)
- [Solar Policy News](#)

DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

## GRANTS

The following solicitations are now available:  
(Click on title to view solicitation)

- [Manufacturing Machines and Equipment](#) - Response due Sep. 15, 2014
- [Secure and Trustworthy Cyberspace](#) - Response due Sep. 19, 2014
- [Nanomanufacturing](#) – Current Closing Date for Applications: Sep. 15, 2014  
Full Proposal Window: Sep.1, 2014 – Sep. 15, 2014 Full Proposal Window: Feb. 01,

2015 – Feb. 17, 2015

- [Civil Infrastructure Systems](#) – Sep. 15, 2014 Submission Window Date(s) (due by 5 p.m. proposer's local time): Full Proposal Window: Sep. 01, 2014 – Sep. 15, 2014 Full Proposal Window: Feb. 01, 2015 – Feb. 17, 2015
- [Frontier Observatory for Research in Geothermal Energy \(FORGE\)](#) – Close Date: Oct. 1, 2014
- [Vehicle Technologies Alternative Fuel Vehicle Deployment Initiatives](#) – Concept Paper Submission Deadline: Aug. 1, 2014 Submission Deadline: Oct. 1, 2014
- [Deployment of Clean Energy & Energy Efficiency on Indian Lands #DE-FOA-0001021](#) – Full Application Submission Deadline: October 2, 2014.
- [Energy for Sustainability](#) – Current Closing Date for Applications: Nov. 5, 2014 Full Proposal Window: Oct. 01, 2014 – Nov. 5, 2014
- [Energy, Power, and Adaptive Systems](#) - Close Date: Nov. 3, 2014
- [National Robotics Initiative](#) - Response due Nov. 14, 2014
- [NSF/DOE Partnership on Advanced Frontiers in Renewable Hydrogen Fuel Production Via Solar Water Splitting Technologies 2014-2016](#) - Close Date: Dec. 11, 2014
- [Energy for Sustainability](#) – Current Closing Date for Applications: Nov. 5, 2014
- [Advanced Fossil Energy Projects](#) - Solicitation Number: DE-SOL-0006303 Expiration Date: Nov. 30, 2016
- [Repowering Assistance Program](#) - Ongoing
- [Rural Business Enterprise Grants](#) - Ongoing
- [Rural Business Opportunity Grants](#) - Ongoing
- [Sustainable Agriculture Research and Education Grants](#) - Ongoing
- [Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power](#) – Various Deadlines
- [U.S. Dept. of Agriculture - Rural Development Grant Assistance](#)
- [Green Refinance Plus](#) - Ongoing